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ESSAYS ON GLOBAL KNOWLEDGE MANAGEMENT SYSTEMS USE

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Organizations have widely deployed a variety of knowledge management systems (KMS) to leverage knowledge resources (Alavi and Leidner 2001). However, the deployment of KMS itself does not guarantee successful knowledge management (Purvis et al. 2001). KMS have to be actually used by individuals to generate benefits (Devaraj and Kohli 2003; Kankanhalli et al. 2005). Nevertheless, our knowledge about what drives individual use of KMS is still limited (Markus 2001). Therefore, this dissertation sets out to advance the understanding of KMS use by providing insights into the determinants of KMS use in global settings.

Drawing on prior research, this dissertation examines three extrinsic factors that affect KMS use through individuals' beliefs (Lewis et al. 2003). The understanding of extrinsic factors is critical but not well developed (Venkatesh and Davis 2000). Without this knowledge, managerial interventions are implausible because beliefs are internal traits of individuals and cannot be directly changed (Lewis et al. 2003). Managers need to understand how extrinsic factors influence individuals' beliefs so that they can tailor strategies and actions to achieve desired knowledge management outcomes. Therefore, this dissertation designs three independent but related studies to investigate the effects of three extrinsic factors, namely social influence, alternative knowledge sources and national culture, on KMS use.

Study 1: The Impact of Social Influence on KMS Use

In the information systems (IS) adoption and use literature, social influence has been discussed as an important driver of an individual's intention to adopt and use information systems (Venkatesh et al. 2003). The notion of social influence emphasizes the impacts of individuals' social environments on their IS adoption and use. It suggests that individuals tend to assimilate social norms and values and thus exhibit similar information systems use patterns as their referential others (Taylor and Todd 1995; Thompson et al. 1991; Venkatesh and Morris 2000). Compared to perceptual factors that influence IS adoption and use, e.g., perceived usefulness and ease of use (Davis 1989), social influence is more volatile over time and is subject to managerial interventions (Lewis et al. 2003). This makes it an important source of change that can be utilized by managers to steer KMS use (Garud and Kumaraswamy 2005).

Furthermore, social influence appears more salient in the context of KMS. Since knowledge is associated with an individual's social status in groups, utilizing KMS might lead to undesired social consequences (Thibaut and Kelley 1959). For instance, it has been argued that using KMS might cause loss of power in workplaces (Gray 2001). These consequences prevent individuals from continuously using KMS. Fortunately, these concerns can be alleviated and even overcome by positive social influence (Kelman 1958; Venkatesh and Morris 2000). Research has found that positive social norms reduce one's concern over using IS (Venkatesh and Morris 2000). Following the norms would gain individuals group membership and status that offset the concern of losing power. In addition, contributing to and using KMS may bring knowledge workers extra benefits, such as respect and recognition (Kankanhalli et al. 2005; Markus 2001). Therefore, over and above other factors that influence KMS use, social influence may become more important to this type of systems.

Despite the effect of social influence suggested by theory, empirical studies on social influence have shown mixed results. On one hand, social influence is found having a positive effect on individuals' intentions to use IS only at the early stage of mandatory IS adoption and having little impact on continued use in some studies (Lewis et al. 2003; Venkatesh et al. 2003). On the other hand, other studies have shown that subjective norm and social identity concern are drivers of system use (Malhotra and Galletta 2005; Song and Kim 2006). These contradictory findings reveal an inadequate understanding of the role of social influence in IS use and present a mixed message to managers.

Given the mixed empirical results, this study adopts a different conceptualization to investigate the effect of social influence. The social influence statement posits that an individual's system use intention is influenced by others' beliefs (Taylor and Todd 1995; Thompson et al. 1991; Venkatesh and Davis 2000). Instead of asking people about their intentions and others' beliefs, this study uses actual system use to measure their intentions and referential others' beliefs. The assumption made here is that an individual's behaviors reflect his/her attitudes and beliefs (Bandura 1986). In the context of IS use, it means that an individual is more likely to have positive beliefs about a system if he/she uses it more (Melone 1990). This theorizing is the other side of most existing models of IS adoption and use. Using behaviors as indicators of intentions and beliefs, the statement about social influence becomes that an individual's system use is influenced by others' system use. This theorizing enables an objective examination of the effect of social influence.

Taking advantage of the longitudinal data of over 80,000 users of a knowledge management system at a major management consulting firm, this study employed panel data analysis techniques to investigate the effect of social influence. The results confirm the effect of social influence on KMS use. Individuals' KMS usage was found positively related to the usage of at least one group of referential others. Moreover, the analysis shows that organizational status moderates the effect of social influence on KMS use. In our sample, senior employees demonstrated different patterns from junior employees in that they were mainly influenced by people from communities of practice while junior employees were influenced mostly by immediate co-workers (peers and subordinates).

Study 2: Individual Knowledge Source Choice

This study investigates individuals' use of internal knowledge sources (including KMS and colleagues) when there are attractive alternatives outside their organizations. Given the plethora of knowledge sources (Hansen and Haas 2001; Teigland and Wasko 2003), KMS may not be the only resource individuals turn to when they need knowledge. For example, many people today will search Google for information and knowledge regardless of whether their organization has an internal source available too. In some sense, KMS are competing with external knowledge sources (Hansen and Haas 2001). This phenomenon has not been well studied. This study thus attempts to contribute to research by providing insights into how individuals choose between internal knowledge sources and external knowledge sources.

Drawing on prior research on knowledge source preference and consumer switching behavior (Kim et al. 2006; Menon and Pfeffer 2003), this study develops an integrated model to investigate the antecedents of individual knowledge source choice. Our model posits that an individual's intention to use internal knowledge sources is a function of his/her satisfaction with internal knowledge, perceived image cost associated with consulting internal knowledge sources, perceived relative value of internal knowledge, accessibility of external knowledge, and management support for internal knowledge sourcing.

At this time, a pilot study to assist in instrument development and preliminary theory testing has been conducted. This pilot study collected survey data at the Canadian offices of an international consulting firm. The data collection followed the procedure suggested by Dillman (2000). After two reminders, 50 individuals completed the survey out of 167 survey recipients over a 2-month period. Partial least squares (PLS) was applied to analyze data.

The results reveal 1) individuals who are more satisfied with internal knowledge perceive internal knowledge more valuable and are more likely to continue using internal knowledge sources, 2) when external knowledge becomes more accessible, individuals tend to value internal knowledge less and thus are less likely to use internal knowledge sources, and 3) more management support for internal knowledge sourcing leads to less concern of losing social status and consequently encourages individuals to use internal knowledge sources more.

Study 3: The Effect of Culture on KMS Use

The third study explores the effect of culture on KMS use in global settings. The design and contents of contemporary KMS are mostly based on the practices in the West (Mason 2003). However, there are different knowledge management practices in other cultures, such as China (Burrows et al. 2005). The discrepancy between the diversity of knowledge management practices and the unified design of KMS makes the use of KMS in different cultures problematic (Paik and Choi 2005). This concerns multinational enterprises who want to share best practices globally. Therefore, it is important to understand the role of culture in KMS use.

This study tries to extend existing research by exploring alternative explanations. Current research on IS adoption and use usually treats culture as a moderator (Srite and Karahanna 2006). However, culture may also be a determinant of individuals' beliefs and perceptions toward KMS use because it is the collective programming of the mind that makes people perceive

things in a certain way (Hofstede 2001). There is not much information on this effect of culture in the literature yet. Seeing this void, this study investigates the mechanisms, such as belief construction, by which culture influences individual KMS use.

At the current stage, this study is looking for research sites. Exercises, interviews and focus groups will be used to help the researcher understand the phenomenon. This approach is consistent with the exploratory nature of this study.

In summary, this dissertation advances the understanding of the effects of three extrinsic factors on individual KMS use through three independent but related studies. Study 1 contributes to the literature by providing objective evidence for the effect of social influence on KMS use. Study 2 furthers the understanding of individuals' use of KMS and other knowledge sources when both internal and external knowledge is easily accessible. Study 3 explores how culture influences KMS use through belief construction and other mechanisms. Overall, this dissertation provides insights into the determinants of individual use of KMS in global settings. The findings can also be applied to other information systems.

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